

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number  
**WO 2005/057702 A3**

(51) International Patent Classification:

H01M 10/42 (2006.01) H01M 8/00 (2006.01)

H01M 16/00 (2006.01) H01M 8/04 (2006.01)

(21) International Application Number:

PCT/IB2004/003946

(22) International Filing Date:

2 December 2004 (02.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-407160 5 December 2003 (05.12.2003) JP

(71) Applicant (for all designated States except US): **TOYOTA JIDOSHA KABUSHIKI KAISHA** [JP/JP]; 1, Toyota-cho, Toyota-shi, Aichi-ken 471-8571 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KAJIWARA, Shigeto** [JP/JP]; c/o Toyota Jidosha Kabushiki Kaisha 1, Toyota-cho, Toyota-shi, Aichi-ken 471-8571 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

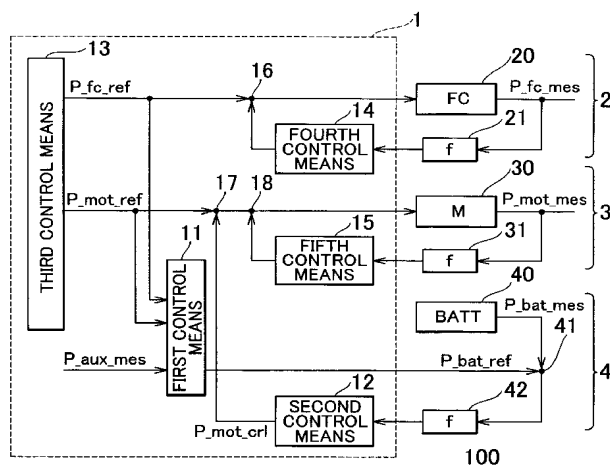
— with international search report

(88) Date of publication of the international search report:

22 June 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HYBRID FUEL CELL SYSTEM



(57) Abstract: According to the invention, a hybrid fuel cell system (100) is characterized by comprising a load portion (3) which consumes electric power; first control means (11) for obtaining a supply electric power set value (P bat ref) indicating electric power supplied from the electric power storage device (40), based on a supply electric power set value (P fc ref) indicating electric power supplied from the fuel cell (20) and a consumption electric power set value (P mot ref) indicating electric power consumed by the load portion (3); difference obtaining means (41) for obtaining a difference between the supply electric power set value (P bat ref) and an actual supply electric power value (P bat mos) indicating electric power actually supplied from the electric power storage device (40); and second control means (12) for controlling the amount of electric power consumed by the load portion (3) based on the difference.

WO 2005/057702 A3